

Comparisons of Job Characteristics

Focus Occupation: Industrial Engineering Technicians (17-3026)

Associated Occupation: Electrical and Electronic Engineering Technicians (17-3023)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 75

Focus Occupation: Industrial Engineering Technicians (17-3026)

Associated Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Computers and Electronics	8.4	15.8	12.6	<< Extensive education and/or training may be required
Engineering and Technology	5.7	12.4	16.7	>> Current knowledge level is likely more than sufficient
Mechanical	6.8	11.6	11.5	0 Current knowledge level may be sufficient
Design	5.2	10.2	13.4	>> Current knowledge level is likely more than sufficient
Telecommunications	3.9	8.4	2.6	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 59

Focus Occupation: Industrial Engineering Technicians (17-3026)

Associated Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Quality Control Analysis	5.9	8.8	8.7	0 Current skill level may be sufficient
Troubleshooting	4.5	8.8	5.0	<< Extensive development of skills in this area may be required
Repairing	3.4	8.0	1.0	<< Extensive development of skills in this area may be required
Equipment Maintenance	3.5	7.9	1.0	<< Extensive development of skills in this area may be required
Equipment Selection	3.3	7.0	2.5	<< Extensive development of skills in this area may be required
Technology Design	2.6	4.9	8.5	>> Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 86			
Focus Occupation: Industrial Engineering Technicians (17-3026) Associated Occupation: Electrical and Electronic Engineering Technicians (17-3023)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Oral Comprehension	12.5	12.2	13.6	>	Current ability level is likely sufficient
Problem Sensitivity	11.1	12.0	12.5	0	Current ability level may be sufficient
Written Comprehension	11.0	12.0	12.3	0	Current ability level may be sufficient
Near Vision	11.1	11.6	13.3	>	Current ability level is likely sufficient
Oral Expression	12.4	11.6	13.2	>	Current ability level is likely sufficient
Deductive Reasoning	10.6	11.1	12.8	>	Current ability level is likely sufficient
Information Ordering	9.9	11.0	10.7	0	Current ability level may be sufficient
Written Expression	9.8	10.7	11.5	0	Current ability level may be sufficient
Finger Dexterity	7.6	9.9	4.6	<<	Extensive improvement in abilities may be required
Visualization	7.5	9.8	10.3	0	Current ability level may be sufficient
Visual Color Discrimination	6.4	9.6	5.3	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 85
Focus Occupation: Industrial Engineering Technicians (17-3026) Associated Occupation: Electrical and Electronic Engineering Technicians (17-3023)		
Work Activities	Exclusivity of Activity	
Analyze technical data, designs, or preliminary specifications	47	
Calculate engineering specifications	64	
Communicate technical information	4	
Confer with engineering, technical or manufacturing personnel	25	
Evaluate engineering data	60	
Examine engineering documents for completeness or accuracy	62	
Follow statistical process control procedures	73	
Inspect facilities or equipment for regulatory compliance	51	
Inspect manufactured products or materials	82	
Prepare technical reports or related documentation	22	
Read blueprints	10	
Read technical drawings	7	

Test equipment as part of engineering projects or processes	67
Understand engineering data or reports	48
Understand service or repair manuals	40
Understand technical operating, service or repair manuals	6
Use drafting or mechanical drawing techniques	50
Use technical information in manufacturing or industrial activities	67
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 72

Focus Occupation: Industrial Engineering Technicians (17-3026)

Associated Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Tools and Technologies	Exclusivity
Business function specific software	1
Cameras	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Electronic and communication measuring and testing instruments	14
Indicating and recording instruments	2
Industry specific software	1
Machine tools	7
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.